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WORK ORDER NUMBER: 17-05-0382

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: EnSafe
Client Project Name: UTC Rialto PW-15 / 0888818881
Attention: Jeff James
5001 Airport Plaza drive
Suite 260
Long Beach, CA 90815-1251

Vikas Patel

Approved for release on 05/11/2017 by:
Vikas Patel
Project Manager

ResultLink ▶

Email your PM ▶

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Client Project Name: UTC Rialto PW-15 / 0888818881
Work Order Number: 17-05-0382

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/04/17. They were assigned to Work Order 17-05-0382.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Detections Summary

Client:	EnSafe			Work Order:	17-05-0382
	5001 Airport Plaza drive, Suite 260			Project Name:	UTC Rialto PW-15 / 0888818881
	Long Beach, CA 90815-1251			Received:	05/04/17

Attn: Jeff James

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Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
PW-15A Init (17-05-0382-1)						
Perchlorate	17		2.0	ug/L	EPA 314.0	N/A
PW 15A Init Dup (17-05-0382-2)						
Perchlorate	17		2.0	ug/L	EPA 314.0	N/A
PW 15B Init (17-05-0382-3)						
Perchlorate	50		2.0	ug/L	EPA 314.0	N/A

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

EnSafe	Date Received:	05/04/17
5001 Airport Plaza drive, Suite 260	Work Order:	17-05-0382
Long Beach, CA 90815-1251	Preparation:	N/A
	Method:	EPA 314.0
	Units:	ug/L

Project: UTC Rialto PW-15 / 0888818881   Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
PW-15A Init	**17-05-0382-1-A**	**05/04/17 09:19**	**Aqueous**	**IC 8**	**N/A**	**05/09/17 23:05**	**170509L01**

Comment(s):   - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Perchlorate	17	2.0	0.71	1.00	

PW 15A Init Dup	**17-05-0382-2-A**	**05/04/17 09:20**	**Aqueous**	**IC 8**	**N/A**	**05/09/17 23:26**	**170509L01**

Comment(s):   - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Perchlorate	17	2.0	0.71	1.00	

PW 15B Init	**17-05-0382-3-A**	**05/04/17 10:04**	**Aqueous**	**IC 8**	**N/A**	**05/09/17 23:46**	**170509L01**

Comment(s):   - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Perchlorate	50	2.0	0.71	1.00	

Method Blank	**099-16-242-624**	**N/A**	**Aqueous**	**IC 8**	**N/A**	**05/09/17 22:25**	**170509L01**

Comment(s):   - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Perchlorate	ND	2.0	0.71	1.00	

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RL: Reporting Limit.   DF: Dilution Factor.   MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

EnSafe	Date Received: 05/04/17
5001 Airport Plaza drive, Suite 260	Work Order: 17-05-0382
Long Beach, CA 90815-1251	Preparation: N/A
	Method: EPA 314.0
Project: UTC Rialto PW-15 / 0888818881	Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
PW-15A Init	Sample	Aqueous	IC 8	N/A	05/09/17 23:05	170509S01
PW-15A Init	Matrix Spike	Aqueous	IC 8	N/A	05/10/17 00:07	170509S01
PW-15A Init	Matrix Spike Duplicate	Aqueous	IC 8	N/A	05/10/17 00:27	170509S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Perchlorate	17.30	50.00	67.95	101	67.49	100	80-120	1	0-15	

RPD: Relative Percent Difference.   CL: Control Limits

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Quality Control - LCS

EnSafe	Date Received: 05/04/17
5001 Airport Plaza drive, Suite 260	Work Order: 17-05-0382
Long Beach, CA 90815-1251	Preparation: N/A
	Method: EPA 314.0
Project: UTC Rialto PW-15 / 0888818881	Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-242-624	LCS	Aqueous	IC 8	N/A	05/09/17 22:45	170509L01

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Perchlorate	25.00	24.92	100	85-115	

RPD: Relative Percent Difference.   CL: Control Limits

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Sample Analysis Summary Report

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Method	**Extraction**	**Chemist ID**	**Instrument**	**Analytical Location**
EPA 314.0	N/A	834	IC 8	1

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

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Glossary of Terms and Qualifiers

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Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN-OF-CUSTODY RECORD

Date 5/4/17

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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

WO NO. / LAB USE ONLY

17-05-0382

LABORATORY CLIENT: Ensate, Inc.

ADDRESS: 4545 Fuller Dr. #342

CITY: Irving **STATE:** TX **ZIP:** 75038

TEL: 972.791.3222 **E-MAIL:** jjames@ensate.com

CLIENT PROJECT NAME / NO.: WTC Ratho PW-15 08888|8881

P.O. NO.:

LAB CONTACT OR QUOTE NO.:

PROJECT CONTACT: Jeff James

GLOBAL ID: **LOG CODE:**

SAMPLER(S): (PRINT): T. Thomas B. Covellone

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ EDD ☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO	TPH(d) ☐ DRO	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / MTBE ☐ 8260	VOCS (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCS (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	Perchlorate 314.0
1	PW-15A Init	5/4/17	9:19	GW	1	X																	X
2	PW-15A Init Dup	"	9:20	GW	1	X																	X
3	PW-15B Init	5/4/17	10:04	GW	1	X																	X

Relinquished by: (Signature) **Received by: (Signature/Affiliation)** Date: 5/4/17 Time: 1439

Relinquished by: (Signature) **Received by: (Signature/Affiliation)** Date: 5/4/17 Time: 1730

Relinquished by: (Signature) **Received by: (Signature/Affiliation)** Date: Time:

2016-04-01-Revision

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WORK ORDER NUMBER: 17–05– _0382_

SAMPLE RECEIPT CHECKLIST

CLIENT: _EnSafe_

COOLER _1_ **OF** _1_

DATE: 05 / _4_ / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3 (CF: 0.0°C); Temperature (w/o CF): _2.2_ °C (w/ CF): _2.2_ °C; ☑ Blank ☐ Sample

    ☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

    ☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: _1091_

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: _1091_
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: _728_

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐

    ☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

    ☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

	Yes	No	N/A
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐

    Aqueous samples for certain analyses received within 15-minute holding time

	Yes	No	N/A
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐

    Unpreserved aqueous sample(s) received for certain analyses

    ☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

	Yes	No	N/A
Container(s) for certain analysis free of headspace	☐	☐	☑

    ☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

    ☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

	Yes	No	N/A
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna$_2$ ☐ 100PJ ☐ 100PJna$_2$ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☑ 125PB

☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☐ 1AGB ☐ 1AGBna$_2$ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO$_3$, **na** = NaOH, **na$_2$** = Na$_2$S$_2$O$_3$, **p** = H$_3$PO$_4$,   Labeled/Checked by: _728_

    s = H$_2$SO$_4$, **u** = ultra-pure, **x** = Na$_2$SO$_3$+NaHSO$_4$.H$_2$O, **znna** = Zn (CH$_3$CO$_2$)$_2$ + NaOH   Reviewed by: _____